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Amylase Catalyzed Synthesis of Glycosyl-Acrylates and their polymerization

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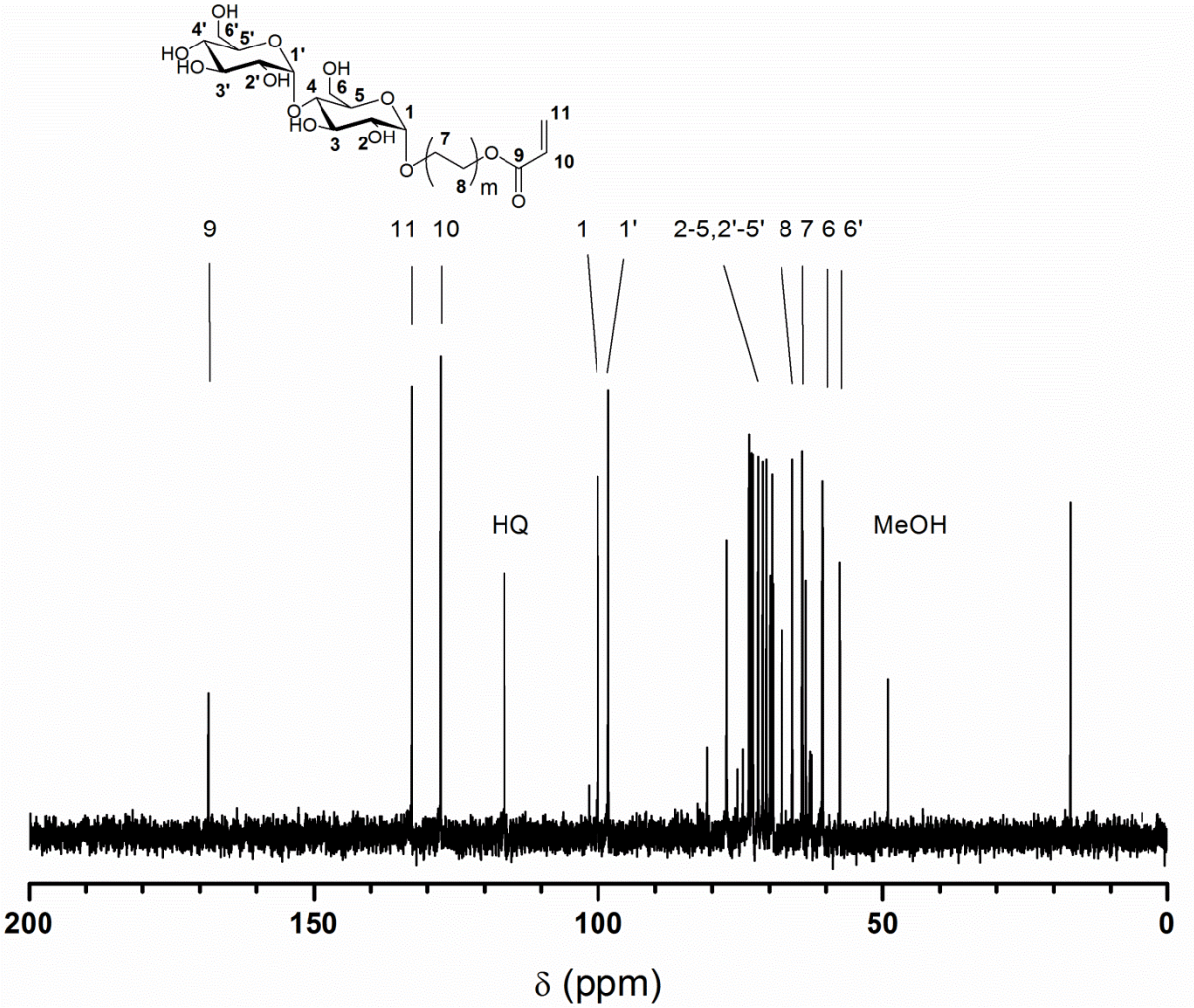

Figure S1. ^{13}C-NMR of Glc-Glc-EA

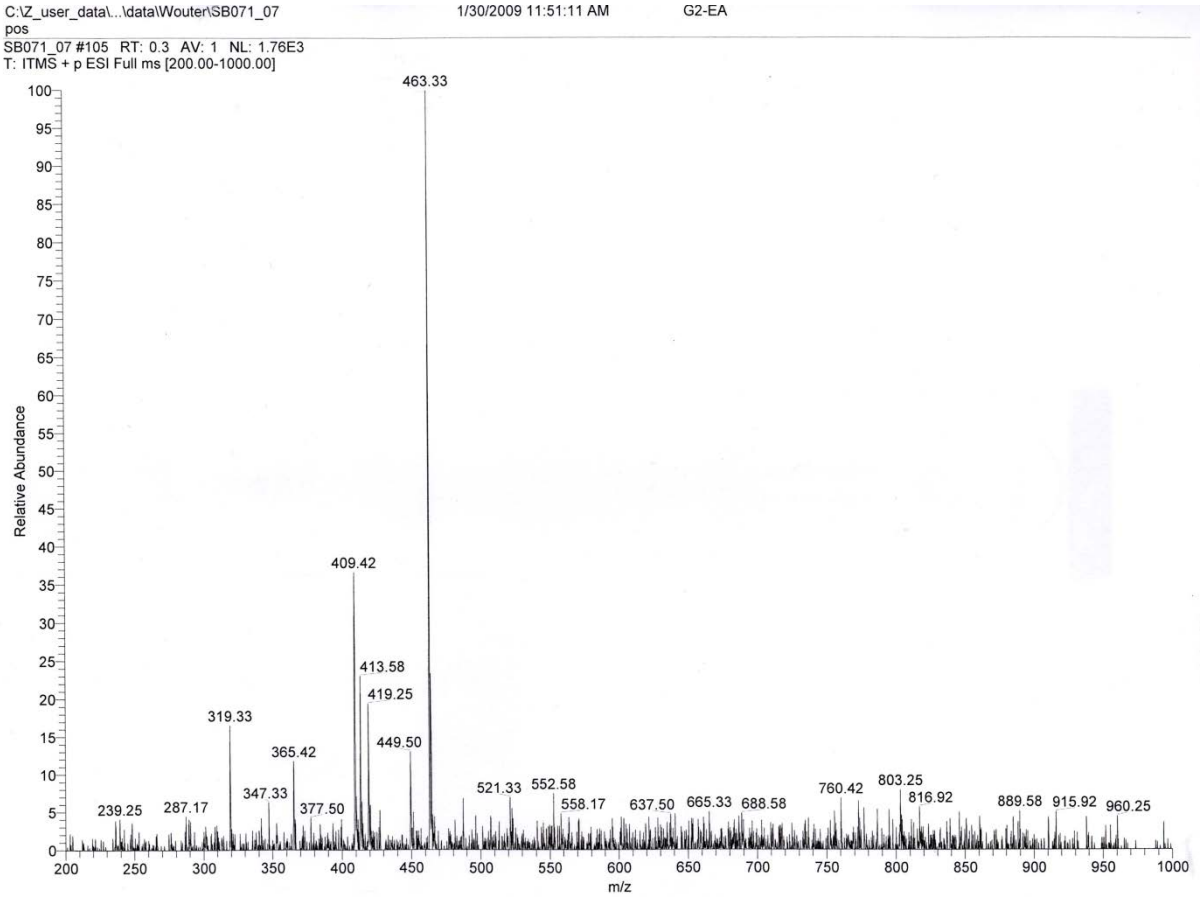

Figure S2. Positive ion ESI-MS spectrum of Glc-Glc-EA

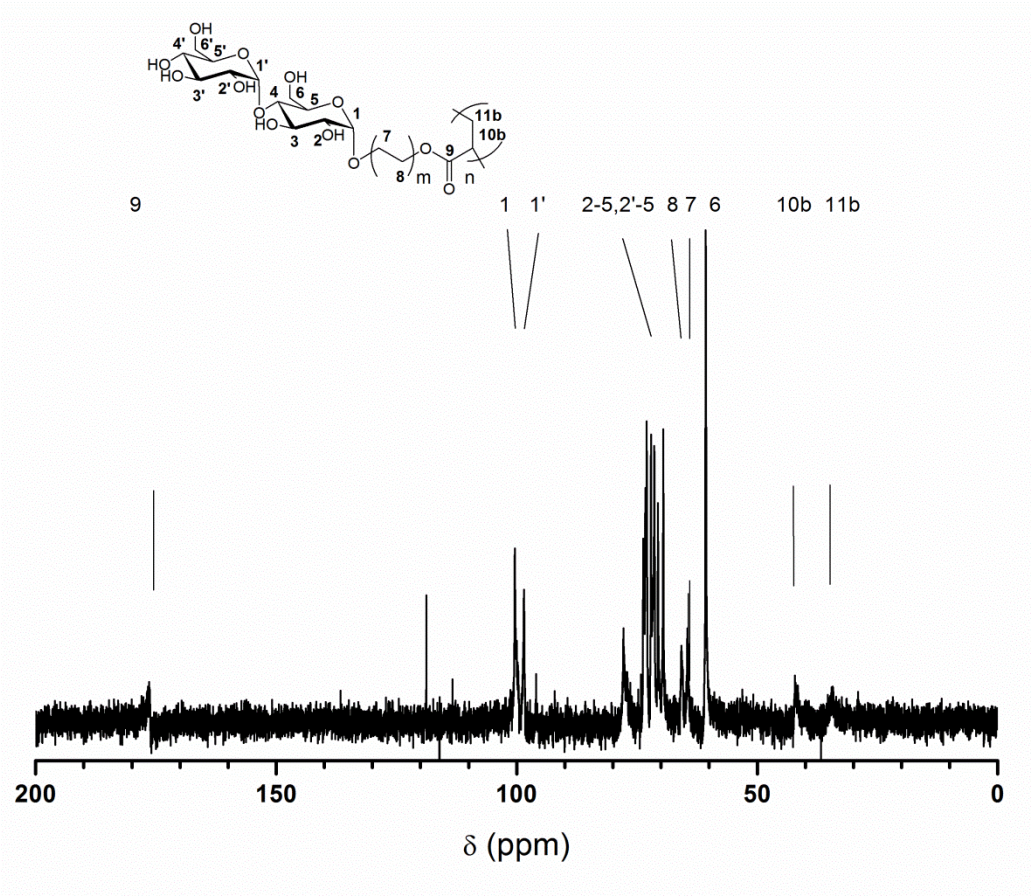

Figure S3. ^{13}C-NMR of Poly(Glc-Glc-EA)

Figure S4 Hydrolytic activity of tested amylases as determined by the DNSS method.

Saccharification amylases

1 U = amount of enzyme that liberates 1 μmol maltose per minute at pH 6.0, 25 ^{o}C using starch as the substrate

Entry	Tradel name	Enzyme type	Enzyme origin	Hydrolytic activity (U/μL)
1	A8220	α-amylase	*Aspergillus oryzae*	16
2	A7595	α-amylase	*B. amyloliquefaciens*	9
3	Biokleitase L500	α-amylase	*B. amyloliquefaciens*	22
4	Optimalt BBA	β-amylase	from barley	7
5	A7130	β-amylase	from barley	26
6	Spezyme DBA	β-amylase	from barley	12
7	NS22035	Amyloglucosidase		7
8	Spirizyme	Amyloglucosidase		9
9	Gammadex	Amyloglucosidase	*A. niger*	4
10	Dextrozyme	Amyloglucosidase	*A. niger*	7
11	A7095	Amyloglucosidase	*A. niger*	12
12	Novamyl L	Maltogenic amylase	*B. stearothermophilus*	2
13	Veron Xtender	Maltogenic amylase	*B. stearothermophilus*	31[a]

[a] Activity in U/mg

Liquefaction amylases

1 U = amount of enzyme that liberates 1 μmol maltose per minute at pH 6.0, 25 ^{o}C using starch as the substrate

Entry	Commercial name	Enzyme origin	Hydrolytic activity (U/μL)
1	Clarase L	*Aspergillus oryzae*	120
2	Neomalz H_2O	*Bacillus subtilis*	21
3	Kleitase T10S	*Bacillus subtilis*	14
4	Liquozyme Supra	Thermostable α-amylase	9
5	Gamalpha P120L	Thermostable α-amylase	10
6	Gamalpha Spezial	Thermostable α-amylase	12
7	Spezyme FRED	*Bacillus licheniformis*	10
8	Spezyme AA	*Bacillus licheniformis*	16
9	Spezyme Alpha	*Bacillus licheniformis*	11
10	Clearflow AA	*Bacillus licheniformis*	12

Figure S5 Remaining activity of the tested amylases after incubation in 30 v% 2-HEA solution at 60 ^{o}C for 15 minutes.